Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Petition for Forbearance from	)	WT Docket No. 01-184
Commercial Mobile Radio Services	)	
Number Portability Obligations	)	

JOINT COMMENTS OF VOICESTREM WIRELESS CORPORATION AND UNITED STATES CELLULAR CORPORATION

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September 21, 2001

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VoiceStream Wireless Corporation and United States Cellular Corporation (collectively, "Joint Commenters") submit these comments in support of the Petition for Forbearance filed by Verizon Wireless.[1] The Joint Commenters agree with Verizon Wireless that the substantial costs of the local number portability ("LNP") mandate cannot be justified given the Commission's determination two months ago that "existing markets demonstrate a high level of competition for mobile telephony customers."[2] The Commission has recognized estimates that LNP implementation would cost industry up to $1 billion,[3] and an expenditure of this magnitude will necessarily divert finite capital from being invested in capabilities that the public wants (*e.g.,* wireless Internet and other "3G" applications).

However, the Joint Commenters support the Verizon Wireless Petition for a second reason: their ability to provide quality services to the public and to implement thousands block number pooling ("pooling") will be seriously jeopardized unless the LNP requirement is de-

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[1] *See Public Notice,* "WTB Seeks Comment on Wireless LNP Forbearance Petition Filed by Verizon Wireless," WT Docket No. 01-184, DA 01-1872 (Aug. 7, 2001).

[2] *Sixth Annual CMRS Competition Report,* FCC 01-192, at 21 (July 17, 2001)("*Sixth CMRS Report*").

[3] *See CTIA LNP Forbearance Order,* 14 FCC Rcd 3092, 3111 ¶ 37 (1999).

ferred. In short, the Joint Commenters also support LNP forbearance because such forbearance will facilitate their ability to implement pooling timely and successfully.

I. INTRODUCTION AND SUMMARY

We have a numbering crisis in our country, and with the unprecedented growth of mobile customers, providers of commercial mobile radio services ("CMRS") are affected by the crisis more severely than any other industry segment. It is becoming increasingly difficult for CMRS carriers to obtain the telephone numbers they need when and where they need them. Without an appropriate inventory of available numbers, a carrier cannot provide service to new customers, and it will be discouraged from both entering new markets and offering promotional pricing in existing markets.

The CMRS industry has always shared the Commission's commitment to improved number utilization. Industry has, moreover, put this commitment into practice: CMRS carriers use their existing number inventory far more efficiently than other industry segments. According to the most recent data, CMRS carriers are using 50.7 percent of their numbers while competitive LECs are using only 10.5 percent of their numbers and rural ILECs are uses only 17.9% of their numbers.[4] Nevertheless, more can be — and should be — done to improve number efficiency. We need to attack the numbering crisis on all fronts because the cost of failure (an entirely new numbering plan) is too great for service providers and customers to bear.

The Commission has decided that CMRS carriers should participate in number pooling effective November 24, 2002, so that they can receive new numbering resources in blocks of 1,000 rather than blocks of 10,000 (an entire NXX code). Implementation of pooling will entail

[4] *See FCC News,* "FCC Releases Numbering Resource Utilization Report," at 1-2 (June 13, 2001); Industry Analysis Division, Numbering Resource Utilization in the United States as of December 31, 2000, Tables 1-3 (June 2001). Non-rural ILECs are using 59.3% of their numbers. *See id.*

an enormous effort, as CMRS carries must change entirely the way they route calls to completion (and abandon use of the dialed digits in the routing process), the way they perform registration, and the way they recognize roamers on their networks. Pooling implementation will require the cooperation of *every* CMRS provider in the nation (*whether or not they provide service in an NPA subject to pooling*). Nevertheless, the Joint Commenters are committed to implementing number pooling in accordance with established requirements so they can further improve the efficiency in which they use scarce numbering resources.

CMRS carriers are also required to convert to LNP on the same date as pooling — on November 24, 2002.[5] The Commission imposed this requirement five years ago because it believed that LNP would "eliminat[e] one major disincentive to switch carriers" and "facilitate the entry of new service providers, such as PCS and covered SMR providers into CMRS markets currently dominated by cellular carriers."[6] The Commission imposed this requirement without conducting a cost-benefits analysis,[7] and it imposed this requirement only six months after Congress determined that LNP was not necessary for competitive CMRS markets.[8]

LNP and pooling are related in the sense that both capabilities require use of the same new "LRN" network architecture, whereby call routing is based on a Location Routing Number

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[5] This November 2002 deadline applies only to CMRS carriers providing services in the 100 most populous MSAs. *See* 47 C.F.R. § 52.31(a). However, by November 2002, rural carriers, while not subject to LNP directly, must be capable of supporting roaming from customers with ported numbers. *See id.* at § 52.31(a)(2).

[6] *First LNP Order,* 11 FCC Rcd 8352, 8434-35 ¶¶ 157-59 (1996).

[7] This omission is especially perplexing because in another order adopted the same day, the FCC again recognized that a cost-benefits analysis was central in determining whether new regulations should be imposed on CMRS providers. *See Second CMRS Interconnection Order,* 11 FCC Rcd 9462, 9473 ¶ 18 (1996). *See also Connecticut CMRS Rate Order,* 10 FCC Rcd 7025, 7031 ¶ 10 (1995), *aff'd,* 78 F.3d 842 (2d Cir. 1996)("The statutory plan is clear. . . . Congress delineated its preference for allowing this emerging [CMRS] market to develop subject to only as much regulation for which the Commission and the states could demonstrate *a clear cut need*.")(emphasis added); *CMRS Resale Order,* 11 FCC Rcd 18455, 18463 ¶ 14 (1996)(CMRS regulation should "not be imposed *unless clearly warranted*.")(emphasis added).

[8] Congress decided in February 1996 that landline LECs, but not CMRS providers already operating in a competitive market, should provide LNP. *See* 47 U.S.C. § 251(b)(2). Unable to rely on the LNP statute, the FCC instead recited its "independent authority" in imposing six months later LNP obligations on the CMRS industry. *See First LNP Order,* 11 FCC Rcd 8352, 8431-32 ¶¶ 152-53 (July 2, 1996).

rather than the dialed digits. However, LNP service and number pooling are *not* the same. LNP is far more complex and costly to implement and operate, requiring the development of more new systems and modifications to more existing systems. The concurrent conversion of LNP and pooling will necessarily divert critical carrier resources from ensuring that at least CMRS pooling is implemented successfully.

Moreover, the consequences of an incomplete or defective conversion are much different. If pooling is not implemented correctly, carriers will be unable to assign "pooled" numbers to customers. If LNP is not implemented correctly, mobile customers with "ported" numbers will be unable to receive any calls to their handset.

The Commission determined two years ago that CMRS LNP was not necessary to protect competition and that forbearance under Section 10 was appropriate.[9] It nevertheless decided to delay the LNP conversion deadline (rather than eliminate the requirement altogether) largely because it believed that LNP was necessary in order for CMRS carriers to participate in pooling.[10] This assumption is not accurate. While LNP and pooling share a common network architecture, LNP itself is not a prerequisite to pooling. Verizon Wireless clearly explained in its Petition that LNP is more complex than pooling and that the simultaneous conversion to LNP and pooling will only inhibit industry's ability to successfully and timely implement pooling.

In the past, the Commission has consistently *required* phased implementation of new technologies because it "consider[s] network reliability to be of paramount importance."[11] Thus,

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[9] *See CMRS LNP Forbearance Order,* 14 FCC Rcd 3092 (Feb. 9, 1999), *on recon.,* 15 FCC Rcd 4727 (Feb. 23, 2000).

[10] *See id.* at 3113-16 ¶¶ 43-48.

[11] *First LNP Reconsideration Order,* 12 FCC Rcd 7236, 7285 ¶ 83 (1997). *See also First NRO Order*, 15 FCC Rcd 7574, 7645 ¶ 159 (2000)("[W]e find that a staggered rollout schedule [for LEC pooling] is necessary."); *First LNP Order*, 11 FCC Rcd 8352, 8394 ¶ 79 (1996)("[W]e have a significant interest in ensuring the integrity of the public switched network as number portability is deployed nationwide. We believe a field test will help to identify technical problems in advance of widespread deployment, thereby safeguarding the network."); *Third LNP Reconsidera-*

LECs implemented LNP in the top 100 MSAs over a 15-month period and, once this task was completed, they thereafter began to phase in number pooling. In stark contrast, although LNP and pooling are far more challenging for CMRS carriers (because of the MIN/MDN separation and roaming impacts), CMRS carriers are required not only to "flash cut" to both capabilities, but also to "flash cut" to both capabilities on the same date — during the middle of their busiest holiday sales season.

The tragic events of September 11 and their aftermath have confirmed that CMRS networks have become a vital and reliable component of the Public Switched Telephone Network ("PSTN").[12] The magnitude of deployment required to flash cut to both LNP and pooling concurrently, however, clearly risks degradation of network reliability and service quality.

It is time for the Commission to reconsider deployment priorities in the light of its commitment to maintaining network reliability. Unquestionably, we have a number depletion crisis in this country. CMRS carrier participation in pooling will help relieve this crisis, and the Joint Commenters support this effort. In contrast, there is no need for CMRS LNP, as competition in the mobile sector continues to flourish without LNP (with CMRS prices falling over 12 percent last year alone and market penetration reaching 38 percent nationally).[13] Indeed, 20,000,000

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tion Order, 13 FCC Rcd 16090, 16097 ¶ 10 (1998)("We continue to believe that network reliability is of utmost importance.").

[12] Cell phones saved lives and proved invaluable to rescue workers. Using temporary transmitters, CMRS carriers promptly restored service to compensate for base stations that had been destroyed, and they donated thousands of phones for use during the rescue efforts. *See, e.g.,* MIAMI HERALD, *Cell Phones Seen as a Lifeline* (Sept. 15, 2001); WIRELESS TODAY, *Trapped World Trade Center Survivors Make Frantic Calls* (Sept. 13, 2001); THE NEW JERSEY RECORD, *Cellphones Can Provide Link to Life, Death* (Sept. 13, 2001); ST. PAUL PIONEER PRESS, *Cell Phones Prove Value in Crisis* (Sept. 14, 2001); WIRELESS INSIDER, *World Trade Center Survivors Made Frantic Calls* (Sept. 17, 2001); RCR WIRELESS NEWS, *Wireless Works as Nation Stops* (Sept. 17, 2001); RCR WIRELESS NEWS, *Last Call* (Sept. 17, 2001).

[13] *See Sixth CMRS Report* at 21 and 28.

mobile customers, one out of five, switched carriers during 2000, confirming the Congressional determination in 1996 that LNP is not necessary for the robustly competitive CMRS market.[14]

The Joint Commenters submit that it is better to focus on one major task and do it well, rather than to undertake two major tasks simultaneously and take a significant risk of being unsuccessful with both tasks. This is particularly the case where, as here, it will be the American consumer who will experience the consequences of the unsuccessful conversion of both pooling and LNP — whether it be the inability to obtain a desired mobile service, the inability to receive or make calls on one's handset, or the inability to roam. Common sense and prudent public policy dictate that the efforts of the CMRS industry be focused on fixing a real problem: pooling for number conservation. Simultaneously pursuing pooling and LNP is a much more complex and costly undertaking and would increase exponentially the risks to continued network reliability. A reexamination of the policy reasons for, and timing of, LNP also is in order.

II. SECTION 10 OF THE COMMUNICATIONS ACT REQUIRES FORBEARANCE FROM THE CMRS LNP OBLIGATION

Verizon Wireless thoughtfully analyzed in its Petition that all three criteria set forth in the forbearance statute, Section 10 of the Communications Act, are satisfied as applied to the CMRS LNP obligation.[15] The Joint Commenters agree.

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[14] *See id.* at 23.

[15] Section 10 *requires* the FCC to forbear from applying any rule when the three statutory criteria are satisfied. *See* 47 U.S.C. § 160(a)("[T]he Commission *shall* forbear from applying any regulation . . . if the Commission determines" that three statutory criteria are satisfied.)(emphasis added). *See also 2000 Biennial Review,* IB Docket No. 00-202, FCC 01-93, at ¶ 10 (March 20, 2001); *Oncor Forbearance Petition,* 16 FCC Rcd 4382, FCC 01-51, at ¶ 2 (Feb. 9, 2001); *Certain Wireless Carrier Forbearance Order,* 15 FCC Rcd 17414, 17416-17 ¶ 3 (Sept. 8, 2000).

A. CMRS LNP IS NOT NECESSARY TO ENSURE JUST AND REASONABLE RATES

The first prong of the Section 10 forbearance test requires the Commission to examine whether retaining its LNP rules is necessary to ensure that CMRS charges and practices are just and reasonable.[16] Two years ago, in February 1999, the Commission determined that LNP is "not necessary to prevent unjust or unreasonable charges or practices by CMRS carriers":

> [C]ompetition in the mobile telecommunications environment has increased significantly as a result of recent service launches by broadband PCS and SMR carriers. . . . Additionally, several pricing trend reports indicate that broadband CMRS prices have been falling and that these reductions are at least partly the result of entry by new competitors.[17]

If LNP was not necessary to ensure reasonable prices in February 1999, LNP is certainly not necessary today, given the added competition that has developed over the past two years. According to the Commission's most recent data, over 214 million people, or 75 percent of the U.S. population, today live in areas with five or more CMRS carriers competing to offer service, and nearly half of all Americans can choose from at least six different mobile carriers.[18] Average CMRS prices have fallen by 23.6 percent since February 1999 alone.[19]

Experience suggests, moreover, that LNP will not necessarily result in lower service prices to consumers. While wireless prices have fallen by over 23 percent over the past 30 months, prices for local landline services have *increased* by over 11 percent — *notwithstanding the fact that most LEC customers can take advantage of LNP with their landline services*.[20]

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[16] *See* 47 U.S.C. § 160(a)(1).

[17] *CMRS LNP Forbearance Order,* 14 FCC Rcd 3092, 3101-02 ¶ 19 (1999).

[18] *See Sixth CMRS Report* at 6.

[19] *See* Bureau of Labor Statistics, Consumer Price Index – All Urban Consumers, Cellular Telephone Services, *available at* http://stats.bls.govv/cpihome.htm. In February 1999, the CPI for mobile services was 89.7. In August 2001, the CPI had fallen to 68.1.

[20] *See* Bureau of Labor Statistics, Consumer Price Index – All Urban Consumers, Telephone Services – Local Charges, *available at* http://stats.bls.govv/cpihome.htm. In February 1999, the CPI for LEC services was 167.1. In August 2001, the CPI had increased to 186.6.

Clearly, CMRS LNP is not necessary to ensure that prices for mobile services remain reasonable and nondiscriminatory — especially since Sections 201 and 202 of the Act can be invoked against any provider attempting to impose unjust or discriminatory charges or practices. Indeed, if the experience with landline LNP is any guide, CMRS LNP may contribute to increased prices to consumers, not lower prices.

B. CMRS LNP IS NOT NECESSARY TO PROTECT CONSUMERS

The second prong of the Section 10 forbearance standard requires the Commission to consider whether enforcement of the CMRS LNP obligation is necessary to protect consumers.[21] Two years ago the Commission determined that there is "no evidence that requiring wireless carriers to adhere to the current [LNP] implementation schedule is necessary to prevent affirmative harm to consumers":

> The record indicates that the demand for wireless [LNP] among CMRS consumers is currently low and that consumers are more concerned about competition in other areas such as price and service quality. In addition, the high incidence of switching between wireless carriers (popularly referred to as "churn") indicates that many wireless customers easily and routinely switch from one carrier to another without the benefit of number portability.[22]

This 1999 Commission finding remains equally valid today. Recent studies confirm that CMRS customers are interested in price, clear and reliable transmission, coverage, and responsive customer care, in that order.[23] Churn rates (regrettably) remain high.[24] According to one

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[21] *See* 47 U.S.C. § 160(a)(2).

[22] *CMRS LNP Forbearance Order,* 14 FCC Rcd at 3103 ¶ 22.

[23] *See, e.g.,* Peter D. Hart Research Associates, "The Wireless Marketplace in 2000" (Feb. 2000), *available at* www.wow-com.com/industry/stats/hart. *See also* WIRELESS INSIDER, *Churn Is Scourge That Affects All, Benefits None* (June 21, 2001)("The bottom line for most customers today is, 'I want the cheapest plan, the best service, and throw in a free phone, too.'").

[24] Carriers have ample incentive to reduce churn because it is far more costly to acquire a new customer than to retain an existing customer. *See, e.g.,* RCR WIRELESS NEWS, *Customer Loyalty Tied to Service Rep Happiness*, at 22 (May 14, 2001)("It costs five-to-12 times more to acquire a new customer than to retain an existing customer."); WIRELESS INSIDER, *Churn Is Scourge That Affects All, Benefits None* (June 21, 2001)(New customer acquisition costs range from $350 to $400). The "problem" with churn (for carriers, not customers) is that most people switch

study, nearly 20 percent of all mobile customers switched service providers during year 2000 alone.[25] The fact that 20 million customers in one year changed carriers without LNP is powerful evidence that LNP would play little role in the intensely competitive market for mobile telecommunications services.

LNP is not on any mobile customer's radar screen, and the capability will not result in the provision of a single new service to consumers. What LNP will do is (a) increase the price of basic mobile service (as carriers recover their sizable LNP implementation and ongoing operational costs) and (b) divert finite capital resources from new services that customers want (*e.g.,* voice dialing, wireless Web access).[26]

C. CMRS LNP FORBEARANCE IS CONSISTENT WITH THE PUBLIC INTEREST

The third and final prong of a Section 10 analysis is for the Commission to consider whether forbearance is consistent with the public interest.[27] Two years ago, the Commission found that forbearance of the LNP obligations is "also in the public interest on competitive grounds":

> [LNP] is not a current priority for wireless customers. . . . [T]he high churn rates associated with wireless carriers suggest that the lack of [LNP] currently is not a barrier to customers switching wireless carriers. [R]equiring wireless carriers to implement [LNP] under the current schedule has the potential to divert available financial and technical resources from other initiatives that could have a more immediate impact on competition, such as network buildout.[28]

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carriers "because of a better deal from another provider." RCR WIRELESS NEWS, *Sprint PCS Leads Pack in Customer Survey*, at 70 (March 19, 2001).

[25] *See* Telephia News Release, "Wireless Phone User Habits Indicate That Switching Providers Is a Significant Industry Concern" (Jan. 16, 2001), *available at* www.telephia.com/press/etrac_switching_011501.html. *See also Sixth CMRS Report* at 23-24.

[26] *See* 47 U.S.C. § 157(a)("It shall be the policy of the United States to encourage the provision of new technologies and new services to the public.").

[27] *See* 47 U.S.C. § 160(a)(3).

[28] *CMRS LNP Forbearance Order,* 14 FCC Rcd at 3109 ¶ 34 and 3111 ¶ 37.

The Commission nonetheless decided to extend the LNP conversion deadline (rather than eliminate the rule altogether) largely because it believed that "implementation of LNP is a necessary precondition to the implementation of number pooling."[29]

In fact, LNP service (porting a subscriber and their telephone number between carriers) is ***not*** a precondition to number pooling. As discussed immediately below, implementation of LNP requires steps not needed for pooling, and LNP will actually complicate the pooling conversion and will as a result, inhibit the ability of CMRS providers to implement pooling successfully.

In summary, the Joint Commenters submit that complete forbearance from all LNP obligations is warranted under Section 10 of the Communications Act. We unquestionably have a numbering crisis that needs to be addressed immediately, and industry's efforts should be focused on successfully implementing pooling to help address this problem. Industry efforts should not be diverted to implementing concurrently an additional, LNP solution for a problem that has not been documented to exist. The uncontested facts are that there is today "a high level of competition for mobile telephony customers" without LNP and that LNP, in fact, may contribute to price increases for basic mobile services.[30] Because the underlying policy reasons for, and the timing of, LNP need to be reexamined, LNP forbearance clearly is in order.

III. ADDRESSING THE NUMBERING CRISIS THROUGH TIMELY IMPLEMENTATION OF NUMBER POOLING SHOULD BE THE PRIMARY FOCUS

Implementation of pooling in CMRS networks will be a major undertaking, as described in subpart A below. Implementation of LNP will be an even more challenging endeavor, as discussed in subpart B. The concurrent implementation of both capabilities will inhibit the ability of CMRS providers to implement number pooling seamlessly and successfully, because finite

[29] *See id*. at ¶¶ 43 and 48.

[30] *Sixth CMRS Report* at 21.

resources necessarily will be devoted to two tasks rather than one. In addition, there is a substantial question whether the national NPAC systems and/or carrier interfaces to the NPAC systems can handle the dramatic increase in message volumes that will immediately occur if the CMRS industry flash cuts to both pooling and LNP on the same date.

A. CMRS POOLING IS A MAJOR UNDERTAKING AND WILL BE MUCH MORE CHALLENGING FOR CMRS CARRIERS THAN LECS

Implementation of number pooling is a major undertaking for any telecommunications carrier. Networks have been designed to route calls based on the digits dialed by the calling party — specifically, the first six digits (NPA-NXX) of the Mobile Directory Number ("MDN") — because these digits have uniquely identified the switch serving the person being called. Use of the dialed digits in call routing is no longer possible with thousands-block pooling because multiple carrier switches may now share the same NPA-NXX combination.[31] Number pooling therefore requires that carriers modify their networks so they instead route calls using an entirely new Location Routing Number ("LRN").[32] Implementation of LRN call routing requires switch modifications and new LRN data bases so the proper LRN number can be obtained (*via* database queries) on every call attempt — the information carriers need to route the call to the proper destination switch. Pooling carriers must also modify their number administration systems, since they will be managing their number inventory, determining utilization, and receiving numbers in blocks of 1,000 (rather than 10,000) and donating uncontaminated or only slightly used (10 percent or less contamination) blocks to the number pool.

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[31] For example, the digits 202-210 currently identify a Sprint PCS switch (BTVLMDCKCM1), 202-251 identify an AT&T Wireless switch (WASHDCDTCM1), 202-306 identify a Verizon Wireless switch (WASICDAZCM1), 202-345 identify a Nextel switch (SLSPMDEJCM1), and 202-352 identify a VoiceStream switch (FRFXVA19CM1). With pooling, several carriers will be sharing numbers with the same NPA-NXX (*e.g.,* number blocks in 202-352 currently assigned to VoiceStream might be reassigned to Nextel or Sprint PCS).

[32] An LRN is a unique ten-digit number assigned to identify each switch or point of interconnection. The first six digits of the LRN are used to route calls to the appropriate carrier's home switch for the number that has been pooled.

LECs are already familiar with these steps, and CMRS carriers must undertake the same modifications. However, CMRS carriers also face several challenges not faced by the landline industry.

1. The MIN/MDN Separation. Currently, most non-GSM wireless customers are identified with one Mobile Directory Number ("MDN") that serves as both the dialable phone number and the handset identifier.[33] In a pooling environment, non-GSM mobile customers will require two types of numbers: a Mobile Directory Number ("MDN"), and a Mobile Identification Number ("MIN") (sometimes referred to as a Mobile Station Identifier or "MSID"), which carriers will use to identify the handset for purposes of authentication and registration.

The MIN/MDN separation requires changes to many CMRS operational support systems (*e.g.,* point of sale, customer provisioning, customer service, billing), as they must be reprogrammed to store and use either the MIN or MDN or both the MIN and the MDN. In addition, due to the need for a separate assignable MIN, the wireless industry must establish a new process for administering MINs, referred to as MIN Block Identification ("MBI") administration, apart from NANPA's administration of MDNs. These requirements, unique to the CMRS industry, involve a major undertaking for most CMRS providers. Importantly, the CMRS industry has already selected an administrator for MBIs in order to facilitate CMRS number pooling.[34]

2. Roaming Impacts. Currently, non-GSM carriers identify roaming customers through the NPA-NXX of their MDN. With pooling, carriers and the national roaming system (CIBER) must instead identify roaming customers through the MBI, the first six-digits of the new MIN. What this means is that before pooling can be implemented anywhere, *every* CMRS carrier that

[33] GSM carriers need not undergo MIN/MDN separation since the GSM protocol already separates these functions. *See CMRS LNP Forbearance Order,* 14 FCC Rcd at 3106-07 ¶ 30. Nevertheless, the MIN/MDN separation is important to GSM carriers that roam with other technologies because of the requirement to support nationwide roaming. The operational support system impacts are similar for GSM carriers because of the use of the MDN in most billing and customer care functions.

supports AMPS, CDMA and TDMA roaming in the country, no matter how small, must upgrade its network to incorporate the MIN/MDN separation and must revise its roaming systems to use MINs rather than MDNs. Thus, although pooling of particular NXX codes will be limited to certain geographical areas, a new infrastructure must be implemented throughout virtually all CMRS networks nationwide. The failure of certain carriers to implement these changes (or implement them correctly) will result in customers being unable to roam in areas where they can roam today.

3. Pooling Catch up (Establishment). LECs have participated in pooling for three years, since June 1, 1998 when the 847 NPA in Illinois was converted. In the past three years, LECs have converted approximately 55 NPAs to pooling. We will soon begin converting NPAs to pooling under the national plan, and 21 NPAs will be converted each quarter under this plan. The Commission determined that 21 NPAs was the maximum number of NPAs that should be converted each quarter in order to protect network reliability.[35]

CMRS carriers will convert the 21 NPAs scheduled for pooling during the fourth quarter of 2002 when they become pooling-capable on November 24, 2002. However, the Joint Commenters estimate that by this time, there will be approximately 140 additional NPAs that are already in pooling. It is not realistic to believe that CMRS carriers will be capable of converting to pooling 160 or so NPAs effective November 24, 2002 — in the middle of their busy holiday season. The paperwork alone would be overwhelming — over 60,000 separate forms.[36] The Joint Commenters want to ensure that the Pooling Administrator ("PA"), Number Portability Admini-

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[34] *See* CTIA Press Release, "NCS Pearson Selected as MBI Administrator" (June 27, 2001).

[35] *See First NRO Order,* 15 FCC Rcd at 7645-46 ¶ 159.

[36] An industry working group has estimated that CMRS carriers would need 19,200 thousands blocks to meet demand during the 4Q02 holiday season (assuming 160 NPAs are in pooling). For the activation of these blocks, CMRS carriers would need to submit to the Pooling Administrator ("PA") 4,800 months-to-exhaust worksheets, 4,800 Part 1a submissions, 19,200 Part 1b submissions, and 19,200 Part 4 submissions. The PA would need to submit to CMRS carriers 4,800 Part 3 returns and to NANPA 19,200 Part 1b submissions.

stration Centers ("NPAC") systems, and NPAC interface systems (*e.g.,* NPAC-to-SOAs and NPAC-to LSMSs) will be able to accommodate this increase in volumes.[37] To develop a manageable pooling catch up schedule, the Wireless Number Portability Subcommittee ("WNPSC") has created a task force to develop a pooling establishment implementation plan through a coordinated effort between the PA, carriers, and regulators. One of the topics that the task force will be discussing is how early the pooling establishment process can begin in order to help ensure that the CMRS industry can timely meet the November 24, 2002 conversion deadline.

While the Commission will need to establish a transition schedule for the conversion to pooling of NPAs that LECs converted to pooling prior to November 2002, the Joint Commenters do not recommend that the Commission address this scheduling issue in this proceeding. This issue has been raised in the reconsideration petitions submitted in response to the *Second NRO Order* (Docket No. 99-200). In addition, the newly named national PA has submitted its initial roll out plan to the Commission, and the Commission has indicated that it will release this proposal for public comment. The Joint Commenters submit that consideration of CMRS pooling scheduling issues is better addressed in that proceeding, by which time the WNPSC task force hopefully will have specific recommendations for the Commission's consideration.

In summary, implementation of pooling is a major undertaking for any carrier. Implementation of pooling in CMRS networks will be even more challenging than implementation in LEC networks, yet CMRS carriers have been required to implement pooling and porting simul-

[37] There is another issue that the FCC must be prepared to address: the availability of Efficient Data Representation ("EDR"). The FCC has noted that EDR, which allows 1,000 numbers to be downloaded and stored as a single record instead of one thousand separate records, is "critical for a nationwide pooling architecture." *First NRO Order,* 15 FCC Rcd at 7657 ¶ 182. It has further noted, correctly, that EDR "should help CMRS carriers implement pooling by the LNP implementation deadline." *Second NRO Order,* 16 FCC Rcd 306 at ¶ 51. The FCC expected that LECs would be implementing EDR one year ago, in July 2000. However, performance issues have arisen with the EDR software being tested in the Northeast (NPAC Release 3.0), and further deployment of NPAC 3.0 and EDR has been suspended. CMRS providers cannot realistically be expected to implement pooling unless most carriers are using EDR.

taneously on a flash cut basis. Clearly, implementation of pooling by itself is a major undertaking for the CMRS industry.

B. THE CONCURRENT IMPLEMENTATION OF CMRS LNP WOULD ADD FAR MORE COMPLEXITY AND COSTS TO THE OVERALL CONVERSION EFFORT

LNP requires the same LRN-based network architecture, MIN/MDN separation, and roaming changes that pooling requires. However, LNP would also require carriers to undertake many additional complex steps, tasks that would not be required if pooling were to be implemented first. Specifically, two additional complex processes — inter-carrier communications and NPAC communications — would be required for LNP to port-in or port-out a subscriber and their telephone number.

Unlike pooling, LNP requires that each carrier establish communications with all other carriers involved in porting. This "inter-carrier communications" process is needed for exchanging the details of porting an individual subscriber and their number between carriers (*e.g.,* validation of customer subscription data and port request; establishment of a date/time for the port). Even if the records of the "old" and "new" service provider match, the volumes of transactions will be enormous — 1,600,000 monthly (based on year 2000 churn rates). Most LNP carriers necessarily need to mechanize this inter-carrier communications process, and most CMRS carriers must install a new Service Order Administration ("SOA") system for this purpose.[38]

There will be times where the records of the "old" and "new" carriers do not match. Industry has established conflict resolution and escalation procedures for use in this situation, and these procedures necessarily involve human intervention. The volumes of these "conflict transactions" is not now known, but use of conflict/escalation procedures in only 10 percent of all

[38] Smaller CMRS carriers may choose to use a third party SOA to meet their porting requirements.

ports will involve 160,000 customers each month. The complexity of the process is intensified because in order to meet customer expectations, the conflict should be resolved within 30 minutes.

The level of communications between the NPACs and each carrier also intensifies with LNP. With pooling, NPAC/carrier communications are largely limited to notifications that a new thousands block has been assigned to a particular carrier. With LNP, similar communications must be conducted, but on a per-number basis (rather than on a per thousands block basis). The volumes of these per-number NPAC/carrier transactions will be huge — 1,600,000 monthly (based on year 2000 churn rates). Industry guidelines specify that the NPAC communications process be completed within two hours, assuming concurrence and no modifications, conflicts, or cancels.

The NPAC communications process becomes even more complicated if the data that the "old" and "new" service provider submit to the NPAC do not match, as any conflicts must be resolved. Cancel procedures must be initiated if the customer changes his or her mind or if there is a mistake (an inadvertent port). Conflict and cancel procedures trigger additional timers in the NPAC, such that processing the port request could be delayed for over two business days. In addition, the "slow horse" problem discussed below may result in port requests being placed in a pending status until the matter is resolved. CMRS carriers must therefore establish Port Centers to handle the modifications, conflicts, and cancels that arise during the inter-carrier and NPAC communications processes. With the large volume of wireless port requests expected, larger carriers anticipate that they will need hundreds of people to man their Port Centers.

The challenge CMRS carriers face is not simply establishing the new inter-carrier and NPAC communications processes, but also modifying existing provisioning, billing, customer care, and operational support systems to interface with the SOA and Port Centers so that the

status of each port request can be tracked. For example, sales representatives currently assign customers numbers from a centrally administered number inventory, and this process will be retained with pooling. The point of sale systems must also be modified to initiate the inter-carrier communications process, as well as manage the return responses. The process is further complicated because wireless license areas are based on county boundaries, and there is no relationship between county boundaries and rate center boundaries. Sales and customer care personnel will require extensive training, and carriers will need to add employees to account for the longer time that must be devoted to many new customers. Many systems (*e.g.,* number inventory, rate, taxation, billing, promotions) must be modified to accommodate foreign MDNs on a per number basis for each port-in activation. Moreover, based upon business arrangements with resellers, associated procedures and/or systems must also be modified.

In summary, LNP service will entail a massive undertaking for CMRS providers, both in implementing the capability and thereafter in operating the system. Operational costs will increase, and these increased costs necessarily will be flowed through to customers. As importantly, implementation of LNP will divert important resources needed to implement pooling. The first priority should be addressing the numbering crisis through the timely and successful nationwide implementation of pooling. The second priority ought to a thorough reassessment of the policy reasons behind LNP.

C. CMRS LNP ALSO POSES A SUBSTANTIAL RISK TO SERVICE QUALITY

The consequences of a failed conversion to LNP are far more serious than the consequences of a failed conversion to pooling. If pooling is not implemented correctly or timely, CMRS carriers will be unable to assign pooled numbers to customers. If LNP is not implemented correctly or time, to give one just example, mobile customers with ported numbers will

be unable to receive any calls to their handset. If there are system or interface capacity problems, and the LRN is not properly downloaded or integrated into affected LSMS or SOA systems, then in a pooling scenario, the pooled number would not be assigned until these problems had been resolved. However, in a porting scenario, the customer port request would be put in a pending status and, most likely, the customer would not be able to receive calls until these problems had been resolved.

A weak link in the LNP process was identified as early as October 1998 when the Slow Horse Subcommittee of the LNPA-Working Group defined the "slow horse" problem. A ported number can be assigned to a customer only when a regional NPAC successfully downloads the pertinent information to all carriers (*via* their Local Service Management Systems or "LSMSs"). The NPACs are designed to provide 99.9 percent availability, and the NPACs are being upgraded with additional processing power to accommodate CMRS porting and pooling volumes. The problem is that several carrier LSMSs are not designed to the same 99.9 percent availability standard. The result is that the national pooling/LNP systems are only as good as the weakest link — the slowest and least reliable LSMS. This is known as the "slow horse" problem. The impacts of the slow horse problem are severe. Best estimates are that the slow horse problem causes service failures to 1.5 to 2.0 percent of landline customers during the NPAC port activation and download process.

The slow horse problem has been discussed repeatedly in NANC and, in September 1999, the Slow Horse Subcommittee recommended adoption of two LSMS standards (one addressing performance and the other, availability) to address the problem.[39] However, measure of availability and performance standards requires implementation of an NPAC change order that is

[39] *See, e.g.,* NANC Meeting Agendas, 15 FCC Rcd 9465 (June 2, 2000), 15 FCC Rcd 8054 (May 5, 2000), 15 FCC Rcd 6066 (April 7, 2000), 15 FCC Rcd 10023 (March 3, 2000)

scheduled for a future Release 4.0. Despite the passage of 2.5 years, the LEC industry has yet to take meaningful steps to eliminate the problem. Unless the industry meaningfully resolves this problem in the near future, CMRS porting volumes will exacerbate the problem and result in service-affecting flaws for over 24,000 customers each month.

IV. THE COMMISSION SHOULD ACT EXPEDITIOUSLY ON THE VERIZON WIRELESS FORBEARANCE PETITION

The November 2002 LNP/pooling conversion deadline is less than 15 months away. Many CMRS carriers already have resources devoted to both activities. The sooner the Commission acts on the Verizon Wireless LNP forbearance petition, the sooner carriers can re-deploy their resources and focus on timely implementation of pooling. The issues are straightforward, and the Commission determined only two years ago that the statutory forbearance criteria had been satisfied. The only change in the past two years is that the CMRS marketplace has become far more competitive and the reasons for forbearance have become more compelling. Accordingly, the CMRS Joint Commenters requests that the Commission act on the Verizon Wireless Petition as soon as possible and, in any event, by November 24, 2001, one year before the planned LNP activation date.

V. CONCLUSION

The Joint Commenters are committed to timely implementation of number pooling because such action will help address the nation's numbering crisis. However, the Joint Commenters cannot agree that LNP currently is necessary or appropriate. The CMRS market is more competitive than it has ever been, and it is far more competitive than the landline local telecommunications sector. The Commission noted only two months that there already exists "a high

level of competition" in the CMRS market and that the clear trend is for more intensified competition in the future.[40]

Increased competition should be rewarded with less regulation, not unnecessary government mandates. Congress determined in 1996 that LNP was not necessary to ensure competition in the CMRS market, and the fact that 20,000,000 mobile customers switched carriers last year alone should be proof positive that LNP is not necessary. What LNP will do is increase the costs of providing basic mobile services and, absent Commission forbearance, inhibit the ability of CMRS carriers to timely and successfully implement pooling.

[40] *Sixth CMRS Report* at 21 and 82.

For the foregoing reasons, the Joint Commenters respectfully request that the Commission forbear entirely from applying its LNP rules to the competitive CMRS industry.

Respectfully submitted,

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September 21, 2001